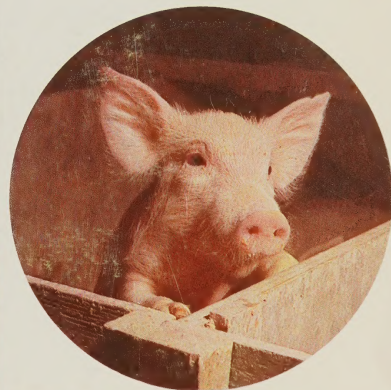


DISCOVERING CANADIAN AGRICULTURE

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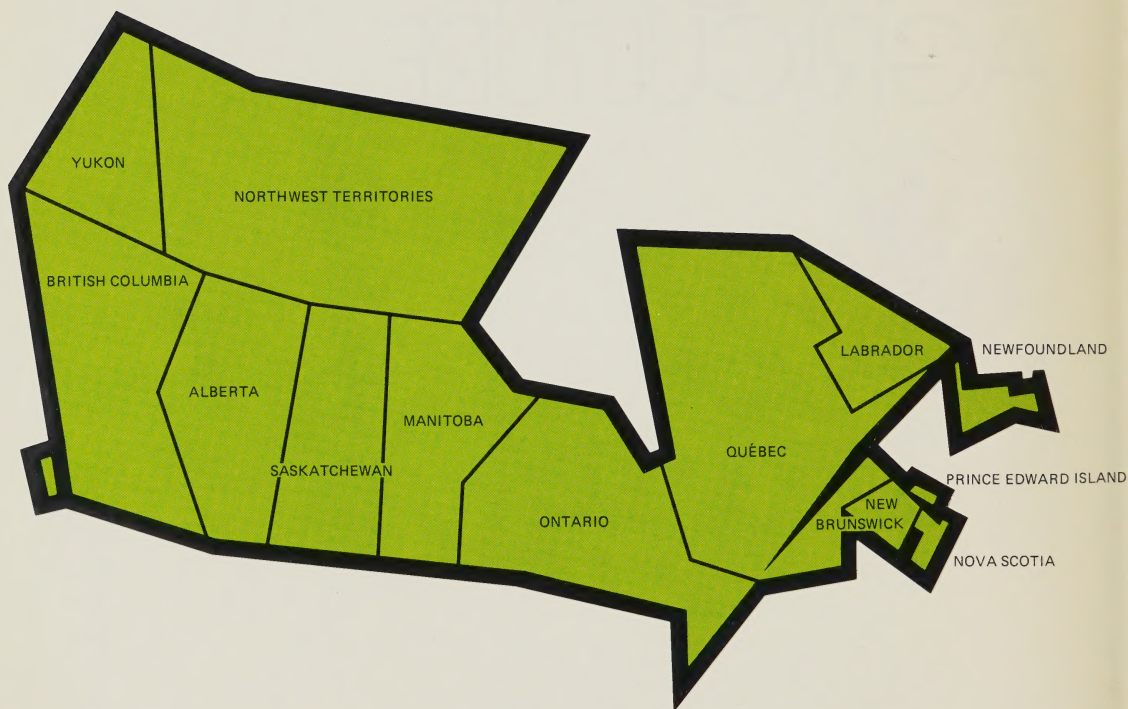




**Agriculture
Canada**

DISCOVERING CANADIAN AGRICULTURE





INTRODUCTION

From the Canadian Pacific port of Vancouver to the Canadian Atlantic port of St. John's, a stretch of some 7400 kilometres, covering some 40 million cultivated hectares, lies one of the world's most productive and varied agricultural economies.

Canadian farmers have concentrated on livestock (33%), grains (27%), and dairy (2%). Distribution of production is associated with the following geographic locations:

- a) Livestock production is concentrated in Ontario, Alberta, Quebec and Saskatchewan.
- b) The greatest number of dairy farms are in Quebec and Ontario.
- c) General grain farms with crops such as wheat, oats, barley, flax and

rapeseed are mostly in Alberta, Saskatchewan and Manitoba.

- d) Farms specializing in crops such as vegetables, fruits, tobacco or maple products are found mainly in Ontario, Quebec, the Maritime provinces and British Columbia.

As a result of constant upgrading of farming practices, new and improved machinery, and new fertilizers and varieties of crops, the productivity of the Canadian farming sector is estimated to increase at an annual growth rate of 3.5%. This is in addition to growth through direct normal expansion of production to meet domestic and world market demands.

Let us take you on a short discovery tour of Canadian Food and Agriculture that is exported . . .

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POULTRY



Poultry production in Canada has gone through revolutionary changes since the arrival of commercial broiler, turkey and egg production technology in the 1950's. Dual-purpose breeds for meat and eggs have been replaced by specialized stock for broiler and for egg production. Improvements in housing, breeding, feeding and disease prevention are other major factors which have influenced the structure of the industry.

The implementation of supply management in the 1970's has had a tremendous stabilizing impact on the poultry industry. Egg, turkey and chicken are now marketed through provincial and national marketing agencies. As a result, Canada is able to offer importers high-quality meat, breeding stock and technology, plus a stable and continuous supply of products.

poultry

year-end review

The Canadian poultry industry includes production of eggs, chicken, turkey and water fowl. In July, 1979 Canada produced 372 million kilograms of chicken meat, 100 million kilograms of turkey meat, 4.5 million kilograms of waterfowl meat and 464 million dozens of eggs. Production is mainly

concentrated in the provinces of Quebec and Ontario.

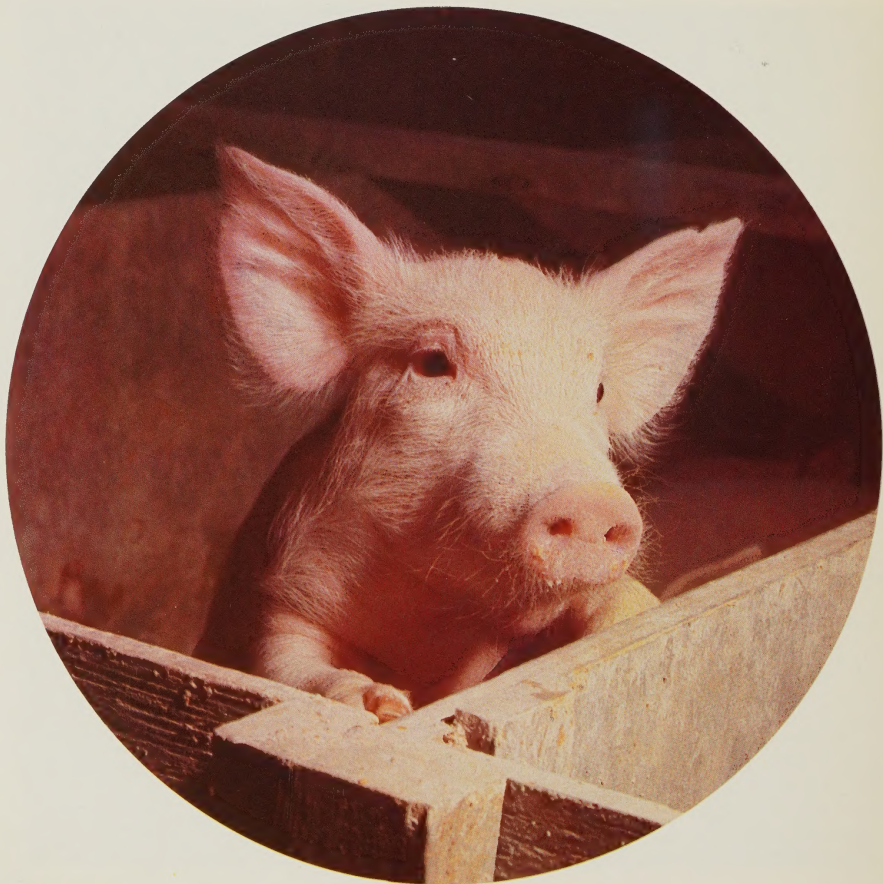
special features

Canada has high quality standards for poultry meats and eggs. These products are processed at registered plants under federal inspection. Poultry products marketing is coordinated through national agencies and provincial marketing boards. Production controls make products available for export markets.

Canada is also renowned for its high-quality breeding production, as well as commercial poultry stocks of egg-type, broiler chickens and turkeys.

Canada is noted for its consultative expertise in poultry production and processing technology.

LIVESTOCK



Canada utilizes a high level of technological development and quality control in the livestock industry.

Canada is a world leader in health inspection and disease control of livestock thus ensuring the supply of wholesome meat to the public. Federal legislation, administered by the Food Production and Inspection Branch of Agriculture Canada, controls and eradicates established diseases and certifies livestock for export. As a result of many precautionary measures under the Act, Canada is one of the few countries remaining free of foot and mouth disease, and this enhances the export position of our livestock industry.

Canada has developed extensive international markets for its livestock industry. Canada's major exports in beef are breeding stock, feeder and slaughter cattle, semen and dressed beef. In hogs, Canada's major exports are in dressed pork and breeding stock.

Research advances have improved our knowledge of nutrition and have brought Canadian feeding practices to among the most sophisticated in the world. As a result, Canadian seedstock produces commercial animals which can be expected to excel under intensive management, using high-energy rations. This results in the quality of pork and beef being classified as excellent.

cattle breeding and artificial insemination

year-end review

Canada has one of the best established beef and dairy cattle breeding businesses in the world, as demonstrated by live exports of cattle breeding lines.

Canada's beef producing herds are comprised of five main breeds: Aberdeen Angus, Charolais, Hereford, Shorthorn and Simmental.

Canada's main dairy herds are comprised of: Holstein-Friesian, Ayrshire, Jersey and Guernsey.

Canada is now a world leader in crossbreeding exotics of Western Europe with traditional North American breeds. This has greatly improved the productivity of the cattle industry at large through the improvement of such economically important traits as reproductive performance, rate of gain, feed conversion, meat quality and milk production.

Canada has also a substantial market in frozen semen and exports semen from all popular breeds plus about 35 others. Strict health standards and quality control are practised in the production of semen.

special features

Canada has a national computer-based Record of Performance Program (ROP) for beef and dairy.

This system of the federal and provincial governments genetically improves the livestock population by identifying the sires and females which produce the most profitable calves. Progeny testing of sires, either in private herds or artificial insemination units, is also available.

Canada's Record of Performance (ROP) program for beef provides information on growth rate and feed conversion for individual animals, and also includes such traits as calving ease, and carcass quality for progeny testing.

The dairy ROP program provides information on the amount of milk and butterfat produced and is used to test individual cows and progeny testing of stud bulls.

provincially-inspected plants. These plants are located across the country, with the major concentrations in Alberta and Ontario.

special features

All beef products destined for international transit must be federally inspected at place of slaughter and point of origin. Meat inspection is carried out by trained government inspectors, who enforce plant sanitation, animal health and adherence to processing regulations.

Most beef is graded by federal government inspectors, who classify each carcass according to quality and cutability.

Boxed beef, where the carcass is divided into primal and eventual consumer cuts, is a growing area in the industry.

finished beef

year-end review

The meat packing industry is the largest food processing industry in Canada and represents the third largest manufacturing industry. This industry comprises 473 federally-inspected packing plants and a number of

pork

year-end review

The major products of Canadian hog production are fresh and processed pork. The high quality of Canadian pork, coupled with large supplies of Canadian feed grains, indicates excellent potential for growth of exports in pork products.

The 7 to 11 million hogs marketed

annually are produced all across the country; however, the major centers are in Quebec, Ontario and Alberta.

Canada's pork industry rests mainly on five breeds: Yorkshire, Landrace, Lacombe, Hampshire and Duroc.

special features

Canada is a world leader in hog production technology. Management and research advances have improved feeding practices.

Virtually all hog carcasses are graded by government inspectors, with payment to the producer based on the grade of the animal. Since the major factor in grading is the cutability feature, Canadian producers have developed one of the leanest hogs in the world.

Canada provides diagnostic laboratory and veterinary services across the country to assist producers in maintaining the health of their livestock. As a result, Canadian swine breeding stock is highly sought, because of the minimal disease status of the Canadian herd (complete absence of pseudorabies, African swine fever, hog cholera, and other viscular diseases).

The ROP program allows breeders to select for growth rate, feed conversion and leanness.

Frozen semen from highly selected and rigorously tested boars is available.



DAIRY



Canada is involved in the exportation of industrial milk (primarily skim milk powder, cheese and evaporated milk). Ontario and Quebec are the largest producers of dairy products, with Quebec accounting for about 40% and Ontario 35% of total production.

Over the past few years, feeding and management techniques, combined with substantial amounts of grain and protein supplements, have contributed to higher milk yields per cow. In recent years, approximately 7 600 to 7 700 million tonnes of milk were produced annually from a dairy herd of around 1.9 to 2.0 million cows.

The level of technology in dairy production is noteworthy. The estimated 425 milk processing plants in Canada utilize a high degree of mechanization and automation to reduce labor costs and human error in such areas as cheesemaking and evaporator and dryer operations.

Stringent government inspection of all exportable dairy products eliminates defects and ensures foreign buyer purchases of the highest quality.

The Canadian Dairy Commission has the major responsibility for the administration of the federal government's dairy program.

evaporated and condensed liquid milk

year-end review

In 1978-79 Canada produced 141.8 thousand tonnes of evaporated milk and 9.4 thousand tonnes of condensed milk.

special features

Prior to export, all evaporated milk is inspected by Agriculture Canada. Three different quality control checks are performed:

- a) Physical — samples are taken to ensure product has good taste, color, texture and consistency.
- b) Chemical — samples are tested to ensure proper content of fat and milk solids.
- c) Bacterial — samples are tested to measure bacterial content, thus ensuring a quality control for storage life.

cheese

year-end review

Cheese production is mainly concentrated in Ontario and Quebec. Total production during 1978 was estimated at 139.8 thousand tonnes and was apportioned as follows:

| | |
|---------------------|----------------------|
| Cheddar | 80.5 thousand tonnes |
| Specialty (Natural) | 59.3 thousand tonnes |

special features

As a result of recently concluded negotiations under multilateral trade between Canada and the European Economic Community, Canada will have freer access for cheese exportation. It is expected that cheddar production will increase dramatically. Also, beginning in 1980, soft cured cheese exports from Canada will enter the U.S.A. without quotas.

Plants that produce cheese for export are licensed and inspected by Agriculture Canada.

Cheese is packaged and manufactured to buyers' specification.

There has been a significant increase in the variety of specialty cheese produced in Canada. These varieties will be major competitors in world export markets.



milk powders

year-end review

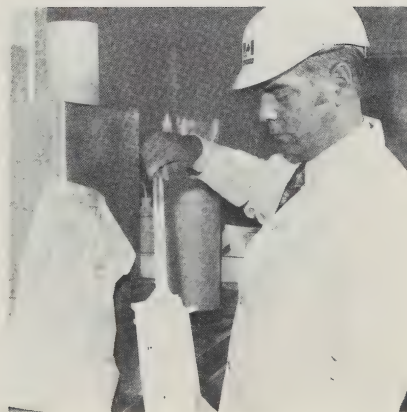
In 1979-80 Canada produced approximately 115 000 tonnes of skim milk powder. This was down somewhat from the 130 400 tonnes produced in 1978-79.

Whole milk powder is produced.

special features

The Canadian Dairy Commission has specifications that must be adhered to prior to the export of any powder.

Whole milk powder is mainly produced under contract to comply to buyers' specifications.



HORTICULTURE



Production of Canada's horticultural crop is limited to areas where there are favorable soils and climatic conditions. The major areas are the lower mainland and the Okanagan Valley of British Columbia, parts of Southern Ontario, on the Niagara Peninsula in particular, and areas of Quebec and the Maritime provinces. Apples, potatoes, blueberries and some processed vegetables are important exportable horticultural crops.

In the Canadian horticultural sector, better insect, disease and weed control and more sophisticated machinery and cultural practices have been responsible for improved efficiency. Better grading equipment and storage facilities and improved instrumentation have ensured high product quality.

processed vegetables

year-end review

The major exportable quantities of vegetables are processed in Eastern Canada, mainly, Ontario and Quebec. Total canned vegetable exports for the 1978-79 growing season were up 61% over year-earlier levels. In 1978-79 Canada processed 95 391 canned tonnes of asparagus, green beans, wax beans

and corn, of which 11 358 tonnes were exported. In addition, the 1978-79 exports of frozen vegetables (mainly peas, beans and corn) were 22.4 million kilograms.

special features

Horticultural products available for export are processed in approximately 300 registered plants.

All processed vegetables available for export are inspected and graded under the Processed Fruit and Vegetable Regulations administered by Agriculture Canada.

As a result of the current exchange rate, Canada's vegetables have been more competitive on the world market.

potatoes

year-end review

Canada has developed a significant processed, table and seed potato export market, primarily from Prince Edward Island, New Brunswick, Quebec and Ontario. In 1979-80 Canadian production of seed potatoes was 269 000 tonnes,

slightly up from the 1978-79 high of 250 000 tonnes. Processed potato exports are expected to increase over year-earlier levels, as the current exchange rate and large supplies of potatoes for processing will ensure Canadian potato producers are very competitive.

After inspection by Agriculture Canada, phytosanitary certificates are issued for seed potatoes to meet requirements of importing countries. Canadian potato processors use the most advanced technology available to produce high-quality frozen french-fried potatoes. Every export shipment of this commodity is inspected by Agriculture Canada and a "certificate of export" is issued only if the shipment complies with the requirements of the Processed Fruit and Vegetable Regulations.

year, with production expected to increase in future years. Varieties offered for export are McIntosh, Red Delicious, Gravenstein, Cortland and Spartan. Approximately one-third of Canada's production is McIntosh.

special features

Improved storage techniques, notably controlled-atmosphere storage, has allowed producers to extend considerably their marketing period.

apples

year-end review

Canada's main production areas for offshore exporting of apples are Nova Scotia, Quebec and British Columbia. It is estimated that domestic production for the 1979-80 growing season will be 436 886 tonnes. It is further estimated that 47 491 tonnes of apples will be exported during 1979-80. A significant increase in sales to oriental markets have been realized for the 1979-80 marketing

blueberries

year-end review

Blueberry exports have increased in volume and value as Canadian production increases and world markets expand. The main producing areas in Canada are British Columbia (highbush blueberries), Newfoundland, Quebec, New Brunswick and Nova Scotia (lowbush blueberries). It is estimated that in 1979 Canada's total production of blueberries will be 14 702 tonnes, up slightly from a 1978 figure of 14 564 tonnes.

special features

All blueberries available for export are graded under the Canada Agricultural Products Standards Act, Processed Fruit and Vegetable Regulations, and shipped as either Canada Fancy or Canada Choice.

Approximately 65% of the crop is exported. Most of the crop is the lowbush variety and is shipped frozen.



GRAINS, OILSEEDS AND SPECIAL CROPS



Canadian grain production in 1979-80 is forecast at 35.6 million tonnes, a decrease of 14% from the previous year's 41.4 million, with wheat down 18% and coarse grains down 10%.

Canadian oilseed production in 1979-80 is forecast at 5.1 million tonnes, an increase from the previous year's 4.7 million.

Canadian rapeseed supply is about the same as last year's, while the production of flaxseed, soybeans and sunflower seed is expected to be up significantly from 1978-79 levels.

Because of tighter supply-demand balance for grains in Canada and the world, Canadian wheat and coarse grain prices in 1979-80 will average higher than in 1978-79. In particular, barley prices should be considerably higher than they were the previous year. Sharp increases are expected in world oilseed production.

wheat

year-end review

Wheat production forecasts for 1979 are as follows: 898 000 tonnes for the Prairies (Alberta, Saskatchewan and Manitoba) and Ontario winter wheat, 1.77 million tonnes of durum wheat, and 14.7 million tonnes of red spring and other wheats.

Wheat has been and continues to be Canada's dominant field crop. About 97% of the area planted to wheat in Canada is in the Prairie Provinces (Alberta, Saskatchewan and Manitoba). Wheat grown in the Prairie Provinces is mainly of the hard spring varieties used for producing bread flour. Ontario is the only other province where production is of commercial significance. Wheat grown in Ontario is mainly a soft winter type and is used in the production of cake and biscuit flours.

special features

Canada has played a major role in plant breeding efforts to develop improved varieties of wheat. The objective has been to develop disease- and rust-resistant varieties while ensuring a high-quality product.

The Canadian Wheat Board (CWB) is the sole marketing agency for the wheat grown in Western Canada entering interprovincial and export trade, with the exception of a small quantity of feed wheat.

All exports of wheat are graded under the Canada Grain Act.

coarse grains

year-end review

Production of coarse grains is as large as or larger than wheat. Most of the coarse grains are grown in the Prairie Provinces (Alberta, Saskatchewan and Manitoba). Ontario is the main corn-producing province. In 1978-79 coarse grain production included 10.4 million tonnes of barley, 4.0 million tonnes of corn, 3.6 million tonnes of oats, and 0.6 million tonnes of rye.

special features

No mandatory supply control mechanisms are imposed on coarse grain producers. The federal government encourages producers to maintain production in balance with market expectations but producer compliance within government production guidelines is entirely voluntary. Grain movement is regulated to ensure appropriate grades and qualities are available in various locations to adequately service export market requirements. Because of the importance of grain in the economy of Canada, the government has provided

special legislation to establish two agencies to carry out the functions of grading and marketing wheat, barley and oats produced in Western Canada, namely the Canadian Grain Commission and the Canadian Wheat Board.

oilseeds

year-end review

Flaxseed, rapeseed, soybeans and sunflowerseed comprise the significant Canadian oilseed industry.

rapeseed

Canadian rapeseed is grown mainly in the Prairie Provinces (Alberta, Saskatchewan and Manitoba). In 1979-80 there was approximately 3 400 000 hectares under cultivation, which yielded nearly 3 485 000 tonnes of rapeseed. Rapeseed is available in the raw seed state or more refined states of oil or meal.

SPECIAL FEATURES Canada is the world's leading source of rapeseed and rapeseed products. In 1978 exports totaled nearly \$400 million. New varieties, low in erucic acid, have been developed. There are also varieties that are low in glucosinolate content of the meal, which is an important characteristic for animal feeds.

flaxseed

Canadian flaxseed is grown mainly in the Prairie Provinces, and Manitoba in particular. In 1979-80 it was estimated that 916 000 hectares yielded 771 730 tonnes. This is a significant increase from the 1978-79 crop of 572 000 tonnes on 520 000 hectares.

soybeans

Most commercial production of soybean takes place in southwestern Ontario. It was estimated that in 1979-80, 280 000 hectares of soybeans were cultivated, and yielded approximately 629 300 tonnes. Soybean for export is available in the raw bean form or the more refined states of flour, meal, milk or oil.

SPECIAL FEATURES Soybeans are graded under the Canada Grain Act. Canadian soybeans yield higher water-soluble protein and consequently a higher meal yield. All soybeans for export are shipped in 100 lb (45 kg) bags which provides better quality assurance.

sunflower seeds

Most of the sunflower crop is grown in Manitoba. In 1979-80 it was estimated that 162 000 hectares were cultivated which yielded some 215 460 tonnes. This represents a significant increase from the

1978-79 crop of 85 600 hectares and some 113 848 tonnes. Sunflowerseeds are available in the raw seed state or the refined oil state.

SPECIAL FEATURES Most of the sunflowerseed crop is grown under contract. Sunflower oil is polyunsaturated and has a high smoke point.



buckwheat

year end review

Buckwheat was mainly produced in Manitoba. In 1979 there was some 65 600 hectares under cultivation, of which 54 000 hectares were in Manitoba. Production for 1979 was 36 900 tonnes.

special features

Most buckwheat is grown under contract. Production of the 1979 crop was down significantly because of mid-August frost.

Most varieties available for export have been bred by plant breeders to provide a specific type of seed required by the principal buyer, Japan.

All produce available for export is graded under the Canada Grain Act.

peas

year-end review

Peas are mainly grown in Manitoba. In 1979 there were 43 200 hectares of peas under cultivation, which yielded 77 600 tonnes.

special features

The majority of the peas grown are under contract. Peas available for export are graded under the Canada Grain Act.

beans

year-end review

Beans are mainly produced in Ontario and the Prairie Provinces. Ontario had 37 600 hectares of white and 6400 hectares of other colored types of beans (including pinto and black) under cultivation in 1979. The Prairies had 4400 hectares of other colored types of beans under cultivation during 1979. Total production for 1979 was 83 000 tonnes, of which 74 100 tonnes were white beans.

special features

Some beans (especially colored) are grown under contract.

In Ontario, white and yellow beans are sold under a Marketing Board arrangement.

All exports of this commodity are graded under the Canada Grain Act.

fababeans

year-end review

Fababeans are grown exclusively in the Prairie Provinces (Manitoba, Alberta and Saskatchewan). In 1979 there was approximately 12 800 hectares under cultivation, which yielded some 25 000 tonnes.

special features

Most of the fababeans grown in Canada are the small seeded variety. In Alberta approximately 600 hectares are grown under irrigated conditions.

Official Canadian Grades under the Canada Grain Act were introduced in 1979.

lentils

year-end review

Commercial production began about 1970 and export demand has been good for lentil production in Saskatchewan and more recently in Manitoba and Alberta. In 1979 there was 18 800 hectares under cultivation, which yielded some 12 000 tonnes. (Yields were below normal due to adverse weather.)

special features

Most of the crop is exported.

Canadian production is mainly of the green lentil variety.

Official grades under the Canada Grain Act were introduced in 1979.

Lentils are grown exclusively under contract.



mustard

year-end review

Mustard is grown mainly in the Prairie Provinces of Manitoba, Saskatchewan and Alberta. In 1979 there was 62 000 hectares under cultivation yielding some 53 300 tonnes, of which 50% was yellow mustard, 25% was brown and 25% was oriental.

special features

Canada is the world's largest consistent exporter of mustard. Most of the mustard crop is grown under contract.

All exports of this commodity are graded under the Canada Grain Act.

maple products

year-end review

Canada produces about two-thirds of the world's supply of maple products. Production in Quebec accounted for 91% of the total 1979 crop, which was 49.7% above that of 1978.

In 1979 there was 10 694 kilolitres of maple syrup, 168 000 kg of maple sugar and 203 000 kg of maple taffy.

special features

Usually half the Canadian output is available for export. In Quebec, the provincial government initiated a program to encourage conversion to tube tapping, which usually produces twice that of bucket tapping. Each shipment of maple products is subject to inspection and governmental certification of grade standards and color classification.



virginia-type flue-cured tobacco

year-end review

Virginia-type flue-cured tobacco is grown principally in southwestern Ontario, with smaller areas in Quebec and the Maritimes (Prince Edward Island, New Brunswick, Nova Scotia). The Ontario production in 1979 is estimated at about 75.6 million kilograms. The production target had been 103.5 million kilograms, with 45 million kilograms for export sales.

special features

Only flue-cured tobacco from Ontario is exported and this tobacco is normally considered equal in quality to the U.S. flue-cured tobaccos.

Official certificates as to origin and type are available from Agriculture Canada.





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